

A Decade of Reform: Helping China Improve its Science and Technology Policy



1999-05-07

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[Photo: Chinese researcher measures a bamboo stalk.]

Chinese people have for centuries used eight-character phrases as proverbs and slogans to communicate messages clearly. One slogan recently in use by the Chinese government to encourage technological and scientific innovation translates roughly as 'Grasp one end firmly and let the other roam free.' It's like saying, 'Keep your feet on the ground and reach for the stars.'

[Geoffrey Oldham](#) found the slogan was well-known when he travelled throughout China as a member of a team of experts — organized by the International Development Research Centre (IDRC) — that reviewed the country's science and technology (S&T) policy. But the message was not always being practised, according to the team's report, [*A Decade of Reform: Science and Technology Policy in China*](#), published in 1997 by IDRC.

Making an impact

Today, the S&T review is beginning to have an impact in China. Although it did not make specific recommendations, some of its findings have been endorsed at the highest level of government and action is being taken on two of the main issues it raised: innovation and international collaboration. "There is no doubt in my mind that the report ... stimulated further analysis and discussion on these two issues," says Oldham.

China introduced its new science and technology policy in 1984 to ensure that S&T activities would contribute effectively to the country's transformation from a centrally planned to a market economy. Ten years later, the government decided to assess China's strengths and weaknesses in basic research, high-technology, the environment, agriculture, and the 'technological renovation' of state-owned enterprises, with the aim of determining whether the policy reforms were working. The government turned to IDRC for help because the Centre had a track record of working in China and had recently completed a similar review in South Africa on behalf of the African National Congress.

Uneven implementation

The IDRC review found that while China's science and technology policy was good on paper, its implementation had been uneven. Moreover, it pointed out widespread duplication of effort — including cases of research institutions located "only a few kilometres apart, essentially doing the same thing, and reporting to different ministries," says Oldham.

Shortly after *A Decade of Reform* was published, it was debated by the State Council's Leading Group on Science and Technology, which is equivalent to a cabinet committee. The Leading Group later ordered the State Science and Technology Commission to put in place a Chinese system of innovation. And late last year, the government granted 5.4 billion yuan (CA\$1 billion) to the Chinese Academy of Science to help finance its next series of reforms, on condition that it demonstrate how the reforms will contribute to the national system of innovation. "We said in the report, 'Wherever you go in the rest of the world, all of the discussion is about innovation,'" states Oldham, who adds that this had not been the case in China.

International collaboration

Besides highlighting the innovation issue, the review team noted China's need for a strategy on international collaboration. "In China, we heard nothing but praise for the benefits they have received from international collaboration in the science and technology area," says Oldham. But collaboration can have negative consequences. For example, some technological and scientific benefits can leave the country. Today, foreign firms have more than 1,000 research and development contracts with Chinese universities.

Madam Zhu Li Lan, China's Minister of Science and Technology and a major backer of the IDRC review, recognizes the need to minimize the negative impact of foreign collaboration. She has established a working group — of which Oldham is a member — to look at the experiences of foreign firms working in China, determine their views on what China does best, and identify what S&T activities China should focus on over the next 10 to 15 years. The working group's findings will be discussed during an international workshop in May 1999, and will be used to help draft an international collaboration strategy for consideration by the government.

Influential report

Since its publication, *A Decade of Reform* has been translated into Chinese and distributed to all officials responsible for science and technology policy at the national and provincial levels. The report was so well-received in China that the government of Viet Nam asked IDRC to conduct a similar review, which resulted in the IDRC publication, [*Viet Nam at the Crossroads: The Role of Science and Technology*](#).

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[Reference: IDRC Project number 954900]

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